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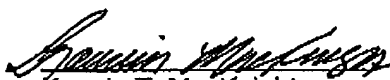
REMARKS

The present application was originally filed with 19 Claims. In the present Restriction Requirement, the Examiner has restricted the Claims into four Groups, with Claims 1-12, drawn to a method of producing a transformed microorganism in Group I; Claim 13, drawn to a library of mutants in Group II; Claims 14-17, drawn to directed evolution of a host cell chromosome in Group III; and Claims 18 and 19, drawn to a method for constructing a sequence of interest in Group 4.

The Examiner argues that the Groups represent separate and patentably distinct inventions. While Applicants must respectfully traverse the restriction requirement, Applicants hereby elect the Claims in Group I (Claims 1-12). The Examiner has also required a species election for Claim 2. Applicants hereby elect the species *Bacillus*. Applicants request that the remaining species be examined, upon the determination that *Bacillus* species is patentable. Applicants also reserve the right to file Divisional application(s) to pursue the presently cancelled Claims. Should the Examiner have any questions regarding this application, he is encouraged to call the undersigned.

Respectfully submitted,

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LIST OF CLAIMS, SHOWING THE STATUS OF EACH CLAIM

Underlining denotes added text while strikethrough denotes deleted text.

IN THE CLAIMS:

1. (original) A method of producing a transformed microorganism, comprising:
- (i) selecting a competent microorganism;
 - (ii) producing a DNA construct *in vitro*; and
 - (iii) directly transforming said microorganism with said DNA construct such that the DNA construct becomes integrated into a chromosome of said microorganism.
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2. (currently amended) The method of claim 1, wherein said microorganism is selected from the group consisting of ~~Acinetobacter, Thermus, Deinococcus, Radiodurans and Bacillus~~ Acinetobacter, Thermus, Deinococcus, Radiodurans and Bacillus.

3. (currently amended) The method of claim 2, wherein said microorganism is a Bacillus ~~Bacillus~~.

4. (currently amended) The method of claim 3, wherein said Bacillus ~~Bacillus~~ is a super-competent strain.

5. (currently amended) The method of claim 4, wherein said super-competent Bacillus ~~Bacillus~~ is a P_{xyl}-comK strain.

6. (original) The method of claim 1, wherein said DNA construct comprises homologous DNA selected from the group consisting of wild-type, mutagenized and modified DNA.

7. (original) The method of claim 1, wherein said DNA construct comprises heterologous DNA selected from the group consisting of wild-type, mutagenized and modified DNA.

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8. (currently amended) The method of claim 1, wherein said DNA construct comprises an incoming sequence ~~sequence~~ of interest, flanked on each side by a homology box.

9. (original) The method of claim 8, wherein said DNA construct further comprises stuffer sequences.

10. (original) The method of claim 1, wherein said DNA construct is a non-plasmid DNA construct.

11. (original) The method of claim 1 wherein the DNA construct is produced without the use of a shuttle vector or an intermediate host.

12. (original) The method of claim 1, further comprising the steps of selecting a target sequence in a chromosome of said competent microorganism, and increasing the homology between said target sequence and said DNA construct.